THREAT TO FREEDOM

But this is not a heritage which we are able to take for granted. Time after time, it has been challenged, and free men have had to join together like the minutemen of yesteryear, and fight to protect our liberty.

In the early part of this century, World War I came about as a challenge to this heritage of ours. I can recall very well the triumphant end of that war. There seemed no doubt then that, not only was freedom our ideal, it was the most powerful and worthwhile concept of human life in history. As a matter of fact, it was a concept which had just been fully vindicated by the outcome of the war.

November 1918 was a great month all right. No one in that hour of triumph could have believed that facism and nazism soon would threaten us. No one could have believed that communism would become the ruthless and relentless menace which later would spread across half the world to plot our destruction.

But we can believe it now. We can see it, hear it, feel it, and know it. Today, we are threatened by a formidable and sinister adversary whose Communist doctrine specifies a program for world domination. The military threat of communism is a very real one since the Communist bloc maintains forces far in excess of that required for its own defense.

There has been, of course, a noticeable change in tactics on the part of the Communist high command. Symptoms of this change are the successful conclusion of the Austrian Treaty, and the apparent Soviet willingness to participate in four-power talks. But there has been no real indication so far that this represents a fundamental change, either in their character or in their basic long-term objectives.

Indeed, communism continues to be the major challenge to our way of life—yours and mine. Its impact bears directly on man's destiny. At issue is the true nature of man himself. It is a struggle which goes to the roots of the human spirit—a struggle we must not lose.

Where does it lead? What can the intelligent college graduate of 1955 do about it?

DEFENSE OF FREEDOM

For one thing, you can keep faith in your country and the freedom for which it stands; and be ready to defend it against all those who would overthrow it.

For you who are being graduated today, I wish I might have the power to install in each of you, a sense of the historic faith in this mission of America that has been handed down through the ages.

After you depart from this campus, you may encounter some individuals who will try to tell you that we live in a world which could be destroyed without notice. They may speak with voices that say we are like Rome was in its declining years. They may even try to tell you that our national values have decayed; that we have no great cause to guide our future history; and that it is futile to try to maintain feelings of true patriotism and self-sacrifice.

This leads, of course, to a newer version of an old saying: "Eat, drink, and be merry, for tomorrow we die."

But what if you do not die? Suppose you should live and face the consequences of not defending your freedom and your way of life with all that is in you—even your life if need be.

I suggest that if any of you young people ever think of betting your future on the world being destroyed, you better take a long look at the odds. These end-of-the-world predictions are not new. Archeologists find them chiseled on stone tablets thousands of years old.

In a similar vein, in our own country men have been wringing their hands over the end of freedom ever since the days of George Washington. Perhaps this occurs when there is a lack of "can do" spirit in fulfilling our mission. Perhaps it comes from Communists themselves who would like us to think that communism is irresistible.

Regardless of where it comes from, or what the cause of it is, I can tell you that communism is not the irresistable force or the only way of the future. I can tell you that we are fortunate—and that we have a good cause.

I can also tell you that the United States, its institutions, its people, and its great progress are refutations of the Communist dogma. We are living proof that the assumptions on which communism is based are false. Our free system is the complete antithesis of Communist dictatorship.

I can tell you all this but, in the final analysis, you must know it for yourself. You, individually and collectively, must be strong in your determination to preserve this Nation, and the freedom for which it stands. You must be stronger and more durable than the forces which would destroy us.

"We hold these truths * * *"—indeed we hold these noble truths right in our own hands. We hold them in trust. If we doubt our mission in the world, we probably will cease to progress. If America ever loses confidence in herself, we will retain the confidence of no one. We could even lose our chance to remain free.

Members of the graduating class: This is your commencement day. Your parents have looked forward to it almost from the day you were born, and they too are to be congratulated. It may be that you will find it difficult to appreciate fully what they have accomplished for you until you endeavor to do the same thing for your children. I am confident that all present here today congratulate them, and are proud of them as well as you.

Then your professors here are to be congratulated. It was no easy task for them to turn out a product such as we see before us in the class of 1955. The improvement, discipline, and cultivation of the youthful mind always is a goal worthy of man's finest efforts.

And now I return to you and me. It is my hope you always will keep with you, your American mission in life, and realize how extremely practical and realistic it is.

Keep the defense of our freedom and our way of life first among your goals in life. Serve your country well. This may not be easy, but it will be a rewarding experience.

For the greatest place of honor is really the place of service.

Congratulations. Good luck. And God bless each of you and your families.

Soviet Union Is Graduating 300,000 More Scientists and Engineers Than the United States

---

EXTENSION OF REMARKS

OF

HON. FRANK THOMPSON, JR.

OF NEW JERSEY

IN THE HOUSE OF REPRESENTATIVES

Friday, April 27, 1955

Mr. THOMPSON of New Jersey. Mr. Speaker, this country faces a severe shortage of engineers and technically trained personnel. The critical nature of the shortage was emphasized by Allen W. Dulles, director of the Central Intelligence Agency in a speech before the Alumni Federation of Columbia University. Mr. Dulles said that in the decade from 1950 to 1960, the Soviet Union would graduate 1,200,000 scientists and engineers, compared to 900,000 in the United States. He warned that unless something was done at once, Soviet scientific manpower might well outnumber ours in many key areas.

I have introduced two bills, H. R. 2211 and H. R. 5152, which would go far toward meeting the problem facing our country today.

The Nation cannot afford to discourage young scientists. At a time when its requirements for trained men are rising sharply, bachelor degrees in science have been dropping, 20 percent in 1950–51, another 25 percent in the next year. In 4 years all bachelor degrees in science and engineering have dropped from 80,000 to 34,000.

During this same period, Russia has been extolling the scholar and scientists and encouraging its best brains to go into research. In a few years, Russia will be graduating 80,000 engineers a year. Last year the United States graduated 19,000. Experts say it would be fatal to underestimate the growing quality of Russian engineers.

It is figures like these which led Dr. John R. Dunning, dean of the Columbia University School of Engineering to say, "We have almost lost the battle for scientific manpower."

One of the major factors in this discouraging situation was discussed by Ben H. Bagdikian in one of a series of important articles which appeared recently in the Evening Star, Washington, D. C. The article was titled "Supersecrecy Slows Advance of Science." It is included here together with an article by Dr. Benjamin Fine, education editor of the New York Times.

I have introduced in the House a companion measure to the resolution offered in the Senate by Senator HUBERT HUMPHREY and Senator JOHN STENNIS. This resolution would establish a special commission on Government security. I am pleased to note that the creation of such a bipartisan commission was unanimously backed recently by a Senate subcommittee even though the administration so far has turned a cold shoulder to the plan.

The commission plan provided in this measure of mine has been urged by many of the country's leaders during the past 3 or 4 years. It is high time that the Congress moved to create such an impartial body and I am sure the country will heartily back the two-party inquiry when it is established.

It is a matter of the most serious natonal importance when, as a 1954 poll showed, half of all new Ph. D.'s say they would prefer a lower salary to going through the present uncertainties of security practices. The 1954 poll showed also that the 33 percent of Ph. D.'s who wanted to work for the Government had dropped to 8 percent and gave the chief reason as the present security program of the Federal Government. If the bipartisan commission, when it is established, will come to grips with this problem we may still win the "battle for scientific manpower."

[From the New York Times of June 5, 1955]

CRITICAL SHORTAGE OF TECHNICALLY TRAINED AMERICANS IS CAUSING MUCH CONCERN

(By Benjamin Fine)

This country faces a severe shortage of engineers and technically trained personnel. The critical nature of the shortage was emphasized last week by Allen W. Dulles, Director of the Central Intelligence Agency. Speaking before the Alumni Federation of Columbia University, Mr. Dulles said that in the decade from 1950 to 1960, the Soviet Union would graduate 1,200,000 scientists and engineers, compared to 900,000 in the United States. And he warned that unless something was done at once, Soviet scientific manpower might well outnumber ours in many key areas.

This month, for example, just about 20,000 engineers will be graduated from American colleges and universities. At the same time, the Soviet Union will graduate more than 55,000. In addition, Russia will graduate far more men in the subprofessional fields of engineering, in the "technical" areas that are so vital in a technological age.

For a long time we boasted that our engineers had greater technical know-how, and were superior in every way to those coming from the Soviet Union. However, experts who have studied the problem say this is no longer true. The caliber of training received by the Russian engineers is rapidly approaching ours, and in some respects may even surpass it.

CHANGES SINCE THE WAR

What is the cause of the engineer shortage? There is no simple answer. Some educators say that the Government itself is to blame. Soon after World War II, when the veterans began to flood the college campuses, the engineering courses became extremely popular. Back in 1950 about 50,000 men were graduated from the engineering colleges. Government-sponsored reports at that time, said that this was too large a number, that our economy could not absorb them. Many engineers could not find jobs.

Then came Korea, and the frenzied attempt to build up our defense establishment in a hurry. We found that we did not have enough engineers or technically trained men to go around. The civilian economy, plus the military needs, absorbed them faster than schools could turn them out.

Other factors entered the picture. The draft took away many potential engineers. The colleges found that it was difficult for them to compete with industry for well-trained faculty members. Somehow, an interest in engineering dipped to a new low, despite the great interest in all things of a technical nature, such as jet planes, atomic weapons and scientific developments.

TO MEET THE PROBLEM

From the long-range point of view, educators are greatly disturbed at the sharp decline in interest in the sciences by high school students. Figures issued recently by the United States Office of Education show that proportionately fewer students now take courses in chemistry, physics, science and mathematics than ever before. More than half the high schools in the country do not even offer chemistry today.

Educators are seriously concerned at the apparent indifference to the engineering and scientific fields shown by college students and high school graduates. At recent conferences, some called for this very purpose, they have proposed certain steps that might bring the situation into better balance.

Among the most frequently mentioned proposals are these:

The creation of a Reserve Officers Training Corps in the fields of engineering and science. At present the campuses support these corps in the various branches of the Army, in the Navy and Air Force. It is known that the Pentagon has under consideration an extension of these programs, to include ROTC units devoted to engineering and scientific students. Under this plan, if approved, the military officials would provide financial support to qualified students in the technical fields. The suggested program appears to have considerable merit. Certainly it would aid those who are interested in the scientific fields but, for financial reasons, are unable to continue in this area.

ENGINEERING SCHOLARSHIPS

Scholarships for engineering and scientific students have been frequently suggested. In effect, the State or Federal Government would "subsidize" potential science or technical students. It is costly to attend engineering schools. MIT, for example, has just announced that its tuition will be increased still further, and will go over the $1,000 mark. Financial support, it has been argued, should go to liberal arts students as well as those in the fields of science. This question, at the moment, is receiving the thoughtful attention of the educational authorities.

Higher salaries for teachers of science and engineering are essential if the faculties are not to be depleted. Although it is true that higher salaries should go to all teachers generally, it is doubly essential in the case of the professors in engineering schools. The competition from industry is so severe that the top-notch men are being drawn off by research groups, the Government and private industry.

More adequate physical facilities are essential. The country needs more engineering laboratories more scientific equipment, better working conditions for the scientific and engineering students.

AVOIDING THE DRAFT

It is also essential, the educators almost unanimously agree, that a more realistic attitude be taken toward the question of selective service. Many complaints have been registered in recent months that scientific and engineering students have been drafted before they have completed their studies. If this is particularly true, the educators say, concerning graduate students. They point to men who get half way through their graduate work in engineering, only to be called into service.

Finally, a better public relations program appears to be badly needed. The educators want their story told to the American public so that greater support will be forthcoming. It is not commonly known that the United States is falling behind the Soviet Union in the training and preparation of able scientists, engineers and technical personnel. The story should be told.

[From the Washington Evening Star of May 31, 1955]

WHAT PRICE SECURITY?—SUPERSECRECY SLOWS ADVANCE OF SCIENCE

(By Ben H. Bagdikian)

Today there is a physicist in a Government laboratory waiting to hear whether he is a "security risk" and therefore in danger of ending his professional career.

Six years ago he asked security officers whether his forthcoming marriage would affect his secret clearance. His fiance had no security problem, but her parents occasionally associated with persons thought to be pro-Communists. The physicist planned never to see his in-laws after the wedding. The security officers assured him the marriage would not jeopardize his status.

Five years later the physicist suddenly had his clearance revoked. The charge: His wife's parents are believed to associate with alleged pro-Communists. The information against him was precisely that volunteered by himself and accepted by the Government. He has appealed at a cost to himself of about $1,000 and approximately $10,000 to the Government. He is still waiting for a decision.

Last year an aeronautical engineer who had worked for the Government for 14 years was suspended from his top secret project in Seattle, putting him out of a job and all but stopping the urgent project. The charge involved information he had given the Government in 1940, which had been investigated and cleared at least twice since then. After 6 months he was restored. The personal cost of the appeal to him was $3,242.83, to the Government, 6 months' loss of time on an important defense project.

These are the kinds of cases that today are causing America's best young scientists to fear Government work. In 1953 a poll of science Ph. D.'s graduating from research universities showed them equally divided on where they would like to work, one-third each in Government, industry, and universities. In 1954—after the investigation of Fort Monmouth and the case of Dr. J. Robert Oppenheimer—a poll of Ph. D.'s showed that the 33 percent who wanted to work for the Government had dropped to 8 percent. The chief reason given: security.

In fact, about half of all the new Ph. D.'s said they would prefer a lower salary to going through the present uncertainties of security practices.

The Nation cannot afford to discourage young scientists. At a time when its requirements for trained men were rising sharply, bachelor degrees in science have been dropping, 20 percent in 1950–51, another 25 percent the next year.

In 4 years all bachelor degrees in science and engineering have dropped from 80,000 to 34,000.

During this same period, Russia has been extolling the scholar and scientist and encouraging its best brains to go into research. In a few years, Russia will be graduating 80,000 engineers a year. Last year the United States graduated 19,000. And experts say it would be fatal to underestimate the growing quality of Russian engineers.

It is figures like these which led Dr. John R. Dunning, dean of the Columbia University School of Engineering, to say, "We have almost lost the battle for scientific manpower."

Similarly, the Government as a whole cannot afford to encourage public contempt of highly trained, studious men, or "eggheads." The Federal establishment would collapse without them. Twenty percent of all Federal employees are of professional rank, most of them with graduate degrees. Another 37 percent are of top industrial skill. But while more than half are of top-grade talent, only 1 percent of Government workers get $9,000 or more. The legal limit for civil service is $14,500 a year. It is precisely in these badly needed skills that the Government cannot compete with private industry in attracting talent.

SECRECY HIT

Another factor in discouraging Government research is supersecrecy. It hampers not only the individual scientist, but at times the Government itself.

Recently, the Department of Defense completed a "secret" project. All that can be said of it is that it cost somewhere between $10,000 and $100,000 and took a number of senior scientists about a year to complete.

Unaware of the "secret" projects, some non-Government scientists in a university did exactly the same work and published their results. The published results were seen by scientists everywhere, who criticized and used them to improve their own projects and push to new horizons. This demonstrates a number of things:

(1) There is no such things as a permanent secret of nature; (2) any scientific discovery is a link to the future which, if kept secret, stalls the next step but does not prevent others from creating their own links;